Throughput in the Emergency Department:

What is the Responsibility of Your ER Physician Group?

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Phoenix Physicians takes great lengths to be proactive, listen, and educate our Hospital partners by offering expertise and tools that can enhance the overall success of their Emergency Departments. Phoenix conducts annual surveys of all our Hospital partners to ensure we are meeting their needs and concerns. These surveys have helped us learn that many key issues are on the minds of all Administrators. Thus, we have created a series of White Papers to address these issues.

The following is the first White Paper in a series of four entitled *Throughput in the Emergency Department: What is the Responsibility of Your ER Physician Group?* Over the course of this year, Phoenix Physicians will be publishing three other White Papers that may be of interest and value to you or another member of your Administrative team. These upcoming quarterly White Papers are titled:

- Emergency Department Patient Satisfaction: The Emergency Physician's Role (May 2011)
- Mid-level Providers in the Emergency Department: How Much is Too Much? (August 2011)
- Emergency Department Physician and MLP Coverage Models: Do I Have What I Need? (November 2011)

On February 22nd 2011, at 11:00 am, Phoenix will be holding a conference call led by Phoenix's CEO Dr. Rob Scott and Phoenix's CMO Dr. Wayne Lee, to review the material presented in this White Paper in more detail. The purpose of the call is to answer any questions and discuss the content further. If you or another member of your Administrative team is interested in participating, please contact Jason Jacobs at the number listed below to register for the call and receive the corresponding passcode.

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Throughput in the Emergency Department: What is the Responsibility of Your ER Physician Group?

Emergency Department (ED) throughput remains a hot topic for all acute care Hospitals in 2011. Hospital Administrators, Board Members, and the community in general are all very interested in patients receiving safe, efficient care in their local Emergency Department. Excellent throughput times in an Emergency Department increases patient satisfaction scores, reduces malpractice risk, and increases Hospital revenue through higher patient volumes and charge capture. Patients will often share their Emergency Department experiences with friends and family, ultimately augmenting (or decaying) the reputation of the Hospital's Emergency Department in the local community. This reputation has a direct impact on future Hospital visits and admissions.

Effective Emergency Department throughput today is multi-faceted and dependent on numerous Hospital departments and people. For optimal ED throughput, one must mandate continuous collaboration and engagement from numerous Hospital departments. Such departments include, but are not limited to Laboratory, Radiology, Environmental Services, the on-call Medical Staff, and various nursing leaders on inpatient units where admitted patients are placed for further care. Each of these departments must bring a committed focus and willingness to continuously improve Hospital throughput everyday.

At Phoenix Physicians, we are often asked by Hospital administrators what specific items an Emergency Department Physician contract group must "be accountable for" in order to assist the Hospital in attaining their ED throughput goals. Based on our experiences managing multiple Emergency Department practices across the U.S., our organization has identified three key actions the Emergency Department Physician Group must take full responsibility for in order to maximize the Hospital's chances for sustained ED throughput success. These three important actions are:

1. Appointing an Effective On-Site Emergency Department Medical Director.

2. Implementing an Appropriate Emergency Physician Staffing Model.

3. Implementing a Productivity-Based Emergency Physician Pay Model.

Putting these three items into place alone will not solve all Emergency Department throughput challenges. It will, however, greatly increase the likelihood of sustained ED throughput success for any Hospital.

An Effective On-Site Emergency Department Medical Director

As with any organization, an effective and experienced Emergency Department Medical Director (EDMD) is vital for the overall success of the Emergency Department. A strong EDMD must understand the vision for the Emergency Department as defined by the Hospital, and work collectively with numerous parties to see this vision through.

In order to champion any key ED initiative (whether it be ED throughput or something else entirely), the first requirement for the appointed on-site EDMD is that they be readily available to address and manage all foreseen and unforeseen challenges the Hospital's Emergency Department may face. To clarify, "readily

available" means that the on-site EDMD must be available administratively, not overworked clinically, and have adequately carved out administrative time to address the existing ED throughput challenges. A common mistake made by the EDMD (or the contract management group appointing this individual) is to "overschedule" the Medical Director for numerous clinical shifts in a month, thus eroding the available time the Medical Director will have each month to work on administrative tasks such as ED throughput challenges. If the ED Medical Director is "overscheduled" clinically (defined as numerous shifts in sequence or frequent night shifts), the EDMD is essentially forced to work on administrative tasks concurrently while on duty seeing patients in the ED. There is just not enough time in the month to work numerous clinical shifts and be readily available to work on Hospital administrative tasks at the same time. Over the long haul, this practice simply does not work; the counterbalance of clinical care and administrative work being done at the same time is not an effective use of time for an EDMD or the Hospital. Such an approach is also unfair to the ED patients the Medical Director is treating on any particular day, as well as the fellow Physicians and ED nurses working alongside him/her clinically.

So, how does one know if your ED Medical Director is potentially "overscheduled" clinically each month? Our experiences tell us that symptoms of this common problem include:

- Your ED Medical Director frequently leaves the ED while on duty to attend important meetings. This usually means the EDMD arrives at the meeting late, leaves the meeting early, and is interrupted often throughout the meeting to make clinical decisions about his/her patients in the ED (such as admitting a patient, reviewing diagnostic test results, or preparing a patient for discharge).

- Your ED Medical Director frequently makes non-emergent administrative phone calls while on duty.

- Your ED Medical Director gives previously scheduled ED tours or job interviews with provider applicants while on duty.

- Your ED Medical Director is absent from the Hospital on most days he/she is not working clinically.

When your ED Medical Director is "overscheduled", there are direct and indirect consequences that will absolutely impact your Hospital's ED throughput. The direct impact is that the ED Medical Director gets distracted with administrative tasks while on duty, and that distraction slows the ED throughput down on that particular day. The indirect impact (and potentially the more concerning of the two) is that the ED Medical Director is generally not prepared or available to attend key meetings in an effective fashion (the EDMD may appear rushed and hurried at such a meeting, if they are even able to show up at all). The key message here is an effective ED Medical Director should have adequate administrative time and frequently be physically present in the Hospital to work on administrative tasks relevant to the Emergency Department while clinically off duty.

To expand on this key point, a good question we are often asked is how many shifts an Emergency Department Medical Director should work clinically each month? While there are no absolute guidelines on this topic, one should assume that as the volume and complexity of an Emergency Department increases, the number of clinical shifts an ED Medical Director should work each month should decrease. The logic behind this is simply due to the increased number of administrative challenges that will undoubtedly arise at a Hospital as the ED volume increases.

A general rule of thumb for the monthly clinical workload for an Emergency Department Medical Director is as follows:

Annual ED Visits	Number of Clinical Shifts per Month
Less than 20,000	14 or less
20,000 - 40,000	10 or less
40,000 - 60,000	8 or less
60,000 - 80,000	7 or less
Over 80,000	6 or less

As the complexity and patient volume of an Emergency Department increases, we believe that the ED Medical Director should be physically present in the Hospital every day during the work week, Monday through Friday. This logic is based on the fact that most key Hospital administrative meetings, activities, and unforeseen immediate challenges occur during the work week and very often during business hours. Having a fresh and energized Medical Director available during these days who is physically present in the Hospital is very important for Hospital Administration. If there is a problem within the ED, it is reassuring to know one can simply walk into the Emergency Department and find the EDMD already in-house managing the problem.

A final key message in regards to the EDMD workload at any Hospital is that the Hospital Administrative team must set clear expectations with the incumbent ED group as to how many clinical shifts the Medical Director will work each month. They also should define and clarify when the ED Medical Director will be available administratively to handle matters and projects that arise. Not having this mutual understanding in advance sets the Hospital up for potential challenges down the road when administrative tasks are potentially neglected by the ED Medical Director and/or the ED group. It is much better to have this EDMD clinical/administrative balance agreed upon beforehand.

EDMD Key Relationships and Working Together

Any experienced ED Medical Director should understand, embrace, and work well with all his/her Hospital "customers". At Phoenix Physicians, we define such Hospital "customers" as the ED patients, Hospital Administration, the Medical Staff, Nursing leadership and staff, EMS, and the ED Physician Group. The most effective EDMDs cater to all of these groups and work to resolve their concerns and address their needs on an ongoing basis. Such concerns often include ED throughput challenges.

Leading an ED throughput initiative on behalf of the Hospital not only requires that the EDMD be fresh and available administratively, it also requires that the EDMD organize and chair a standing communication forum that will be held no less than monthly to predict and address all ED throughput challenges as they arise. Of course, if Hospital ED throughput is a high priority item with many challenges still to overcome, increasing the frequency of this standing meeting will be necessary. A weekly meeting might even be reasonable; it all depends on how well things are functioning at the time.

Once this standing meeting schedule is agreed upon, it is critical that the EDMD regularly invite and engage key individuals that have a role in ED throughput. Such individuals likely include:

- The Emergency Department Nursing Manager.
- The Hospital Laboratory Director.
- The Hospital Radiology Director.
- The Environmental Services Director.
- The Critical Care Services Nursing Director.
- The Hospital Chief Nursing Officer/Vice President of Patient Care Services.
- Key Medical Staff Members (Hospitalist Director, Radiology Director, etc.).
- Others as necessary (Risk Manager, Quality Manager, etc.).

In these standing meetings, minutes should be kept and reviewed regularly. Goals and benchmarked metrics for each department should be established, agreed upon, and tracked consistently through a dashboard or scoreboard that all parties have access to on a regular basis. Ongoing challenges should be discussed regularly and plans for actions agreed upon. A strong EDMD should also be able to communicate ongoing challenges and plans of action to all appropriate parties on a regular basis verbally and electronically. Email communication should be done regularly to ensure all parties not in attendance will be fully informed as to progress and action plans that are necessary.

The "Right" Emergency Physician Staffing Model

ED throughput is also dependent on the Emergency Department Physician Group's staffing model. An inadequate amount of Physician coverage will obviously result in ED throughput delays and a spike in Leaving Without Treatment Rates (LWTs). As one would expect, at some high volume "tipping point," there are just too many patients presenting each hour for the Physician(s) on duty to keep up. The proper amount of Physician coverage arranged incorrectly will also prove to be an ineffective use of resources. A well thought out Physician staffing plan must take into account patient volumes, patient acuity, and daily registration trends to set the right number of shift start and stop times each day. A well conceived staffing plan must also consider the "right" ratio of Emergency Physician coverage to Allied Health Professional (AHP) coverage. An AHP is defined as a Physician Assistant or Nurse Practitioner who works alongside Emergency Physicians in the Emergency Department, most often in a Fast Track (or other lower acuity) setting. The vast majority of Emergency Departments today use some combination of Physician and AHP shifts to treat the patients who present to the Emergency Department each day. Although the exclusive use of Physicians would theoretically result in the absolute best care possible, using Physicians exclusively in an ED in most situations today is neither economically feasible nor practical.

In the world of Emergency Medicine, an Emergency Physician's individual work productivity is typically measured by the number of patients they can treat per hour of clinical work in the ED. As one might expect, the number of patients a typical Emergency Physician can see on average per hour of work in the ED is impacted by many things. These include patient acuity, the Physician documentation mechanism, as well as all things that affect overall ED patient throughput. For instance, a highly productive Emergency Physician can be slowed down by a cumbersome EMR, a slow lab turnaround process, a backlog in radiology, or a complex case placed into a Fast Track by mistake. In the end however, ED Physicians are "only human," and at some point they reach a maximum productivity level, and can go no faster without the potential for unintended consequences.

In most EDs, one can generally assume that an Emergency Physician can treat and disposition in an effective manner between 2.0 and 2.25 patients per hour of clinical work. Assuming this is the "industry standard", the next question to answer is how this number might change if an AHP is added into the equation. As one might expect, adding an AHP shift increases productivity and ED throughput. However, one should also assume that one additional hour of AHP coverage in the ED is not the same as one hour of Physician coverage in the ED. Because an AHP has to work under the supervision of a Physician and an AHP does not possess as much training as a Physician, an AHP clinical hour cannot be viewed as equal to a Physician hour.

At Phoenix Physicians, we value one AHP hour in the ED as equivalent to 60% of a Physician hour in the ED. As an example, one 12 hour clinical AHP shift would be the equivalent of 7.2 Physician clinical hours (12 AHP hours x 60% = 7.2 "Physician Equivalent" hours).

To demonstrate this modeling using a real world example, if an Emergency Department registers 45,000 annual patients per year, one should expect the Emergency Department coverage model to have between 55 and 62 equivalent hours of Physician coverage each day. That corresponds to between 2.0 and 2.25 patients registered per provider hour. Furthermore, if between 55 and 62 hours of "Physician Equivalent" coverage each day is what is desired, one could choose to staff the Emergency Department one of the following ways:

Physician Hours Per Day	AHP Hours Per Day	Total "Physician Equivalent" Hours Per Day
60	0	60
48	12 (12 x 60% = 7.2)	55.2
48	20 (20 x 60% = 12)	60

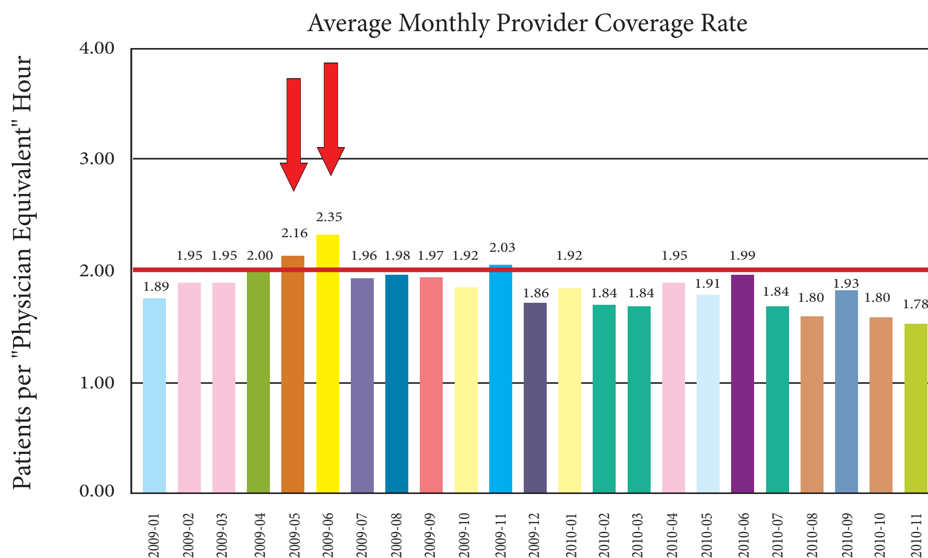
In the green scenario, the Hospital has an all Physician coverage model that amounts to 60 clinical hours per day. This equates to 2.05 patients per Physician hour (45,000 visits/365 days/60 "Physician Equivalent" clinical hours each day), which is acceptable based on the 2.0 to 2.25 patients/hour benchmark. This would be a "gold standard" staffing model.

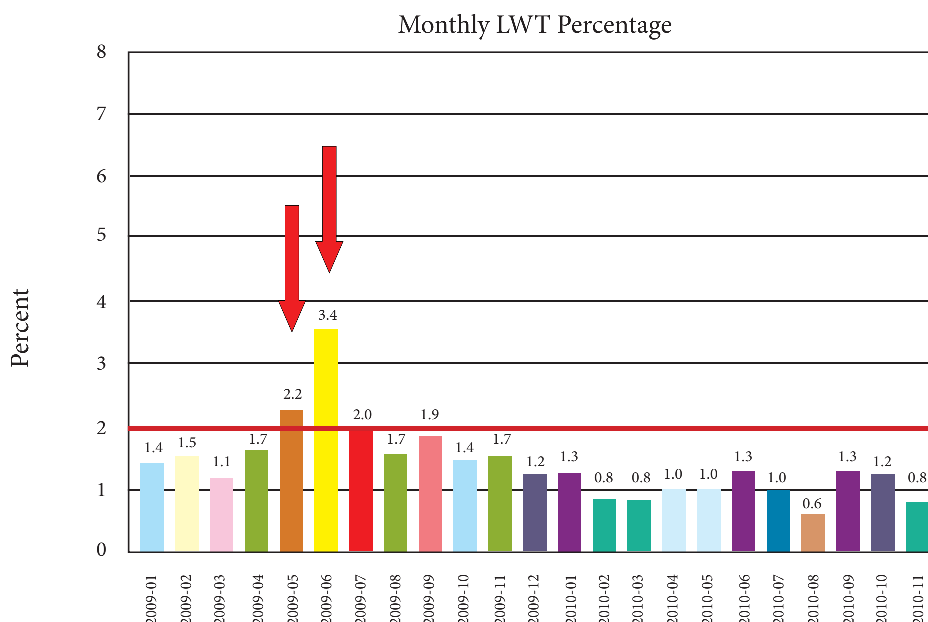
In the pink scenario, the Hospital has 48 hours of Physician coverage and 12 hours of AHP coverage each day. This equates to 2.23 patients per Physician hour (45,000 visits/365 days /55.2 "Physician Equivalent" clinical hours each day). In this scenario, the coverage is also adequate (it falls between 2.0 and 2.25), but it is not as ideal as a gold standard model with all Physicians. It will, however, be more cost effective.

In the blue scenario, the hospital has 48 hours of Physician coverage and 20 hours of AHP coverage each day. This equates to 2.05 patients per Physician hour, just as in the green scenario (45,000 visits/365 days/60 "Physician Equivalent" clinical hours each day). The important difference between the green scenario and the blue scenario is that more patients will be seen by an AHP in the blue scenario. This fact must be weighed against malpractice risk, medical staff concerns, and the need for additional clinical oversight protocols.

To further clarify these points, the following two graphs demonstrate actual historical data from a large Phoenix Physicians Emergency Department practice. In the top graph, the actual number of patients who registered each month against that month's Physician coverage model is plotted. The 2.0 patients per "Physician Equivalent" hour benchmark is highlighted with a red horizontal line. In the bottom graph, the monthly Leaving Without Treatment percentage for that same practice is highlighted, with a 2% LWT rate benchmark highlighted with a red horizontal line.

As one can see clearly in these two graphs below, as the number of registered patients increased in the Spring of 2009 (due to the H1N1 craze in May and June of that year), the increased registered volume put an unusual amount of immediate pressure on the existing Emergency Physician staffing plan. The result was a sudden increase in the number of registered patients per "Physician Equivalent" hour, rising the metric to as high as 2.35 in June 2009. The net result of this volume surge was an increase in LWT rates (and throughput times) in those months. As the registered volume leveled off beginning in July of 2009, the Physician staffing model returned to an appropriate number under 2.0 registered patients per "Physician Equivalent" hour in every month. As a result, the monthly LWT rates remained very low.





In order to determine what options a Hospital has for ED Physician staffing, Phoenix Physicians highly recommends that Hospital Administrators understand these ED Physician staffing concepts presented in this White Paper, and be able to use this data to evaluate their ED staffing model currently in place at their Hospital. If the current coverage model amounts to a number above 2.25 patients per "Physician Equivalent" hour, or if you believe you have an overabundance of AHP hours each day, it may be time to discuss your ED staffing plan with your Physician Group.

Implementing a Productivity-Based Physician Pay Model

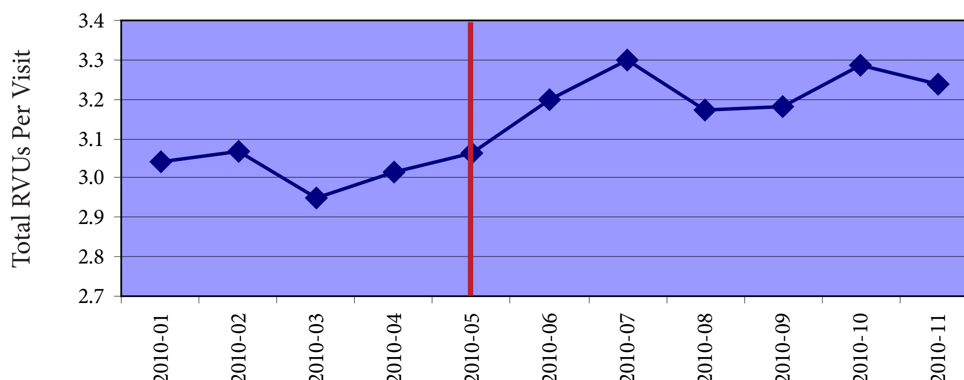
Lastly, in order to maximize ED throughput success, the ED Physicians in the group must be compensated via an effective, transparent, easy-to-understand incentive pay system. Our organization typically scores a 99%+ "satisfied" rating with our providers in terms of their payroll/compensation processing, and this positive feedback is based on those three simple principles. As we all know, there are numerous incentive pay model designs for Emergency Physicians today. Don't be fooled however, just because an ER Physician Group says they pay their doctors on incentive - you must dig deeper and ask for specifics. In our opinion, the optimal Physician pay model is one where at least 50% of the total Physician compensation is tied directly to the RVUs generated by the Physician. In essence, 50%+ of the pay should be "at risk" each pay period, based exclusively on individual RVU production. This means that if the RVUs are not generated, there is no reimbursement.

Over time we have learned that if one compensates ED Physicians via an "at risk" incentive pay system with 50% or more of their pay dependent on personal RVU production, one will rapidly obtain the following key outcomes (that cannot be obtained otherwise):

- A genuine interest by each individual ED Physician in the group to have Hospital ED staff place patients in treatment areas so they can be seen by them. Since a large portion of their pay is directly tied to the Physician work they do on shift, generating RVUs is a vital component of their day. Seeing patients is the only way to accumulate RVUs.

- A genuine interest by each individual ED Physician to capture charges effectively. Since their pay is directly tied to the Physician work they do on shift, capturing charges effectively is a vital component of their day. Effective charge capture will increase RVU production.

The graph demonstrates an actual Phoenix Physicians practice where an incentive pay model was implemented in May 2010 (red vertical line). This particular incentive pay model puts 60% of each Physician's pay in the practice "at risk" each month, tying it directly to their individual RVU production. The marked points represent the Physician Group's average number of total RVUs generated per patient treated, by month. As you can see, there has been an immediate spike in captured charges by the Physicians in the group as a result of this "at-risk" pay model being implemented.



In addition to paying ED Physicians a defined dollar amount for each RVU they personally generate, there are often associated questions about how the RVUs generated by AHPs should be handled. Common questions include whether the Physicians should be credited (and paid) for the RVUs generated by the AHPs, and whether AHPs should be paid on an RVU incentive program as well?

In our experiences, we believe that all RVUs generated in the ED should be credited to a Physician, whether the Physician provided that care directly or through the help of an AHP. Given that all incurred malpractice risk for the care falls on the shoulders of the Physician who signs their name to the chart, we strongly believe the Physician should be credited for those RVUs. Even more, our Company experience does not suggest that AHPs should be paid based on RVU production. If AHPs were paid this way, the potential exists for a Physician and an AHP to "compete" for a case in the treatment area. We view this as problematic, as one never wants an AHP to "wrestle" a case away from a Physician who is willing to see the patient. In an RVU based pay model for AHPs, we can see this happening. Thus, we believe that all AHPs in an ED should be paid hourly, and only the Emergency Physicians should be paid via an "at-risk" RVU productivity model.

Summary

As we have outlined in this White Paper, if a Hospital is finding ED throughput to be an ongoing challenge, it is our belief that the Emergency Physician Group has three fundamental responsibilities to the Hospital. Once again, these three responsibilities are:

- Appointing an effective on-site Emergency Department Medical Director who has the proper administrative time to work on ED throughput challenges and is not "overscheduled" clinically.

- Implementing an appropriate Emergency Physician staffing model that makes certain the overall patients registered per "Physician Equivalent" hour is between 2.0 and 2.25, and weighs the risks/benefits of Physician vs. AHP shift utilization.

- Implementing a productivity-based Emergency Physician pay model with no less than 50% of the hourly compensation for each individual Physician "at risk" and tied to individual RVU production.

Although there is no simple solution to a Hospital's ED throughput challenges, if a Hospital can be certain their ED group has these three key items firmly in place, that Hospital is well on their way to sustained ED throughput success in 2011.

About Phoenix Physicians

Phoenix Physicians is a leading Physician-owned practice management company based in Fort Lauderdale, Florida, providing adult and pediatric Emergency Medicine services to Hospitals and Health Systems nationwide. Phoenix currently provides quality care to over 750,000 patients annually and all of our partnering Hospitals can attest that we focus our operations on key clinical initiatives that result in enhanced patient safety and satisfaction, successful physician recruitment and retention, and positive financial outcomes for our Hospital clients.

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